

# Saturday Magazine.

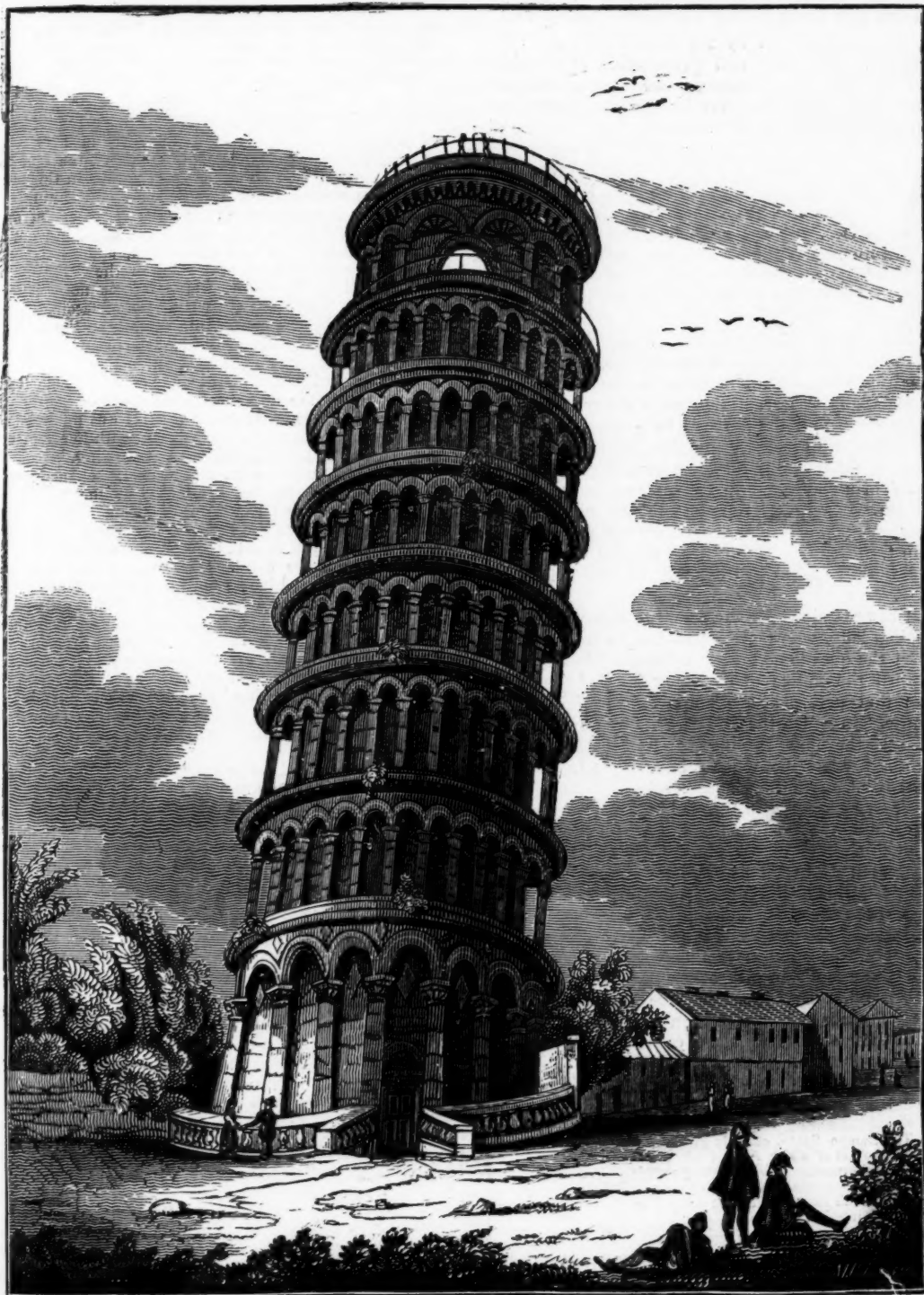
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UNDER THE DIRECTION OF THE COMMITTEE OF GENERAL LITERATURE AND EDUCATION  
APPOINTED BY THE SOCIETY FOR PROMOTING CHRISTIAN KNOWLEDGE.



THE LEANING TOWER AT PISA.

## LEANING TOWERS.

## No. III. THE LEANING TOWER AT PISA.

IN concluding our observations on leaning towers, there only remains for us to notice the celebrated tower at Pisa, in Italy. Its height is about 187 feet, it is ascended by 355 steps, and contains seven bells. It stands alone, unconnected with the neighbouring buildings, and was probably intended as an ornamental belfry\*. It is inclined from the perpendicular rather more than fourteen feet. It is built of marble and granite, and has eight stories, formed of arches, supported by 207 pillars, and divided by cornices. Its form and proportions are graceful, and its whole appearance, from a short distance, remarkably beautiful. Whilst approaching the city (which is situated on an extensive plain) at the distance of a few miles, the effect, when the tower is seen over the tops of the trees, between two others which are perpendicular, is so striking, that the spectator feels almost inclined to doubt the evidence of his senses. It was erected about A. D. 1174, by Wilhelmus, or William, a German architect, assisted by two Pisans. From the inclination of the stairs, it seems to a person going up or down hastily to roll like a ship. This beautiful structure, notwithstanding its inclination, seems to have withstood the ravages of time with more than usual success, as it has now stood for more than 600 years, without any fissure, or the slightest perceptible sign of decay. Travellers, antiquaries, and the learned in general, have been perplexed and divided in opinion, with respect to the cause of the inclination: some have argued in favour of its being accidental; others have merely stated the different opinions on the subject, without giving their own; whilst Dr. Arnott, in his popular work "on the Elements of Physics," distinctly says that it was built intentionally inclined, to frighten or surprise.

It has remained for the accurate observation of an English lady, who travelled in Italy a few years ago, to set the question at rest, by discovering what had escaped the notice of so many learned gentlemen. "In that part of the Campo Santo †," says Mrs. Starke, "in which the life of St. Ranieri is painted, we see the now leaning tower upright." These paintings are supposed to have been done about A. D. 1300, more than one hundred years after the tower was erected: so that it may now be considered as certain, that the inclination was caused by the gradual sinking of the earth, as in all the other instances in Italy. This opinion is confirmed by the circumstances of the lowest row of pillars being sunk deep in the earth, the mouldings not running parallel with the horizon, and the inclination of the stairs. Very accurate models of this tower, are frequently beautifully made in alabaster and marble; a shop in the Strand, near Somerset-house, is seldom without one of these elegant ornaments in the window. With these observations, we conclude the subject of Leaning Towers.

\* Detached belfries, on a smaller scale, are still to be found near churches in some parts of England, particularly in Norfolk and Suffolk.

† The Campo Santo, or Holy Field, is a neighbouring burying-ground, the soil of which was brought from the Holy Land. The cloisters are ornamented with curious paintings on stucco, and contain some fine monuments and beautiful remains of antiquity. The Diorama in the regent's Park at present exhibits a most accurate view of the interior.

IN discordancy of sentiments, it is better to look to the nature of things, than to the humours of men. The very attempt towards pleasing every body, discovers a temper always flashy, and often false and insincere.—BURKE.

## A VISIT TO THE FALLS OF NIAGARA.

THE following account of a visit to the Falls of Niagara has been communicated to us by Mr. N. GOULD. It forms a part of his unpublished *Notes on America and Canada*.

"My attention had been kept alive, and I was all awake to the sound of the cataract; but, though within a few miles, I heard nothing. A cloud hanging nearly steady over the forest, was pointed out to me as the 'spray-cloud'; at length we drove up to *Forsyth's Hotel*, and the mighty Niagara was full in view. My first impression was that of disappointment; a sour sort of deep disappointment, causing, for a few minutes, a kind of vacuity; but while I mused I began to take in the grandeur of the scene. This impression is not unusual on viewing objects beyond the ready catch of the senses; Stonehenge and St. Paul's Cathedral seldom excite much surprise at first sight; the enormous Pyramids, I have heard travellers say, strike with awe and silence on the near approach, but require time to appreciate. The fact is, that the first view of Niagara is a bad one, and the eye, in this situation can comprehend but a small part of the wonderful scene. You look down upon the cataract instead of up to it; the confined channel, and the depth of it, prevent the astounding roar which was anticipated, and at the same time the eye wanders midway between the water and the cloud formed by the spray, which it sees not. After a quarter of an hour's gaze, I felt a kind of fascination,—a desire to find myself gliding into eternity in the centre of the Grand Fall, over which the bright-green water appears to glide, like oil, without the least commotion.

"I approached nearly to the edge of the Table Rock, and looked into the abyss. A Miss C—, from Devonshire, had just retired from the spot; I was informed she had approached its very edge, and sat with her feet over the edge,—an awful and dangerous proceeding.

"Having viewed the spot, and made myself acquainted with some of its localities, I returned to the hotel (*Forsyth's*), which, as well as its neighbouring rival, is admirably situated for the view; from my chamber-window I looked directly upon it, and the first night I could find but little sleep from the noise. Every view I took increased my admiration, and I began to think that the other Falls I had seen were, in comparison, like runs from kettle-spouts on hot plates. I remained in this interesting neighbourhood five days, and saw the Fall in almost every point of view. From its extent, and the angular line it forms, the eye cannot embrace it all at once, and, probably, from this cause it is that no drawing has ever yet done justice to it. Some faint idea of this grand cataract may be formed, by giving its extent according to what on the spot is considered nearest the truth.

"Lake Erie, a fresh water sea, 230 miles long, and nearly 50 miles wide on an average, suddenly contracts itself about eight miles above the Falls, from whence the river Niagara, (nearly a mile broad) runs with a rapid current for about five miles, when it divides into two streams, forming Grand Island, containing about 18,000 acres, and Navy Island containing 70 acres. The two streams now unite, and are about two miles broad, near the village and river of Chippewa; a little below this, the river contracts to the breadth of about a mile, and the current becomes strong; but when three quarters of a mile from the fall the stream is again divided by Goat Island. By far the greater body of water runs on the British side of the island, where it is hurried into a grand rapid, lowering its height fifty feet, before it precipitates itself by a perpendicular pitch a height of 149 feet.

"Of the two falls, that on the British side is by far the grandest: from its shape, it is called the HORSE-SHOE, but as it is evidently working backwards, the shape has become almost an angle. As to its extent, the Horse-shoe, including its curve, is about 2100 feet; the breadth of Goat Island intervening, about 980 feet; the American Falls, 1140, making the whole extent about 4220 feet, or full three quarters of a mile. The height of the Horse-shoe Fall is 149 feet, of the American Falls, 162 feet.

"The grandest view, in my opinion, is at its bottom, and close to it on the British side, where it is awful to look up through the spray at the immense body as it comes pouring over, deafening you with its roar; the lighter spray, at a considerable distance, hangs poised in the air, like an eternal cloud. The next best view is on the American side,

to reach which you cross in a crazy ferry-boat; the passage is safe enough, but the current is strongly agitated. Its depth, as near to the Falls as can be approached, is from 180 to 200 feet. The water, as it passes over the rock, where it is not whipped into foam, is a most beautiful sea-green, and it is the same at the bottom of the Falls. The foam, which floats away in large bodies, feels and looks like salt water after a storm: it has a strong fishy smell. The river, at the ferry, is 1170 feet wide. There is a great quantity of fish, particularly sturgeon and bass, as well as eels; the latter creep up against the rock under the Falls, as if desirous of finding some mode of surmounting the heights.

"There is a stair-case, to ascend the cliff on the American side, and a cleverly-constructed bridge of eight arches across the rapids, above the Fall, to Goat Island. No small share of boldness and ingenuity has been displayed, in throwing this bridge across, by General Porter, of the United States. A small sum is required of visitors in crossing it. The island itself is a pretty and sequestered spot: on the side towards the British frontier, a platform has been carried out for a considerable distance, immediately over the Fall, on its very edge, so that you may look down upon, or rather *into*, the abyss. An excellent road was forming (1828), on the British side, to the ferry, by blasting the rock, a similar operation being designed on the American side also.

"Some of the visitors to this singular spot, go *under* the Falls, an undertaking more curious than pleasant. Three times did I go down to the house, and once paid for my guide and *bathing* dress, when something occurred to prevent me. The lady before alluded to, performed the ceremony, and it is recorded with her name in the book, that she went to the furthest extent that the guides can or will proceed. It is described, as like being under a heavy shower-bath, with a tremendous whirlwind driving your breath from you, and causing a peculiarly unpleasant sensation at the chest. The footing over the *débris* being slippery, the darkness barely visible, and the roar almost deafening. In the passage you kick against eels, many of them unwilling to move, even when touched; they appear to be endeavouring to work their way up the stream."

I HAD an opportunity of witnessing the case of a young cuckoo which was hatched in the nest of a water-wagtail, who had built in some ivy on a wall close to my house. It required the united efforts of both the old birds from morning to night to satisfy his hunger, and I never saw birds more indefatigable than they were. When the young cuckoo had nearly arrived at his full size, he appeared on the nest of the water-wagtail, 'like a giant in a cock-boat.' Just before he could fly he was put in a cage, in which situation the old birds continued to feed him, till by some accident he made his escape, and remained in a high elm-tree near the house. Here the water-wagtails were observed to feed him with the same assiduity for at least a fortnight afterwards. This cuckoo was very pugnacious, and would strike with its wings and open its mouth in great anger, whenever I put my hand near him.—JESSE.

It is an error, to imagine that devotion enjoins a total contempt of all the pleasures and amusements of human society. It checks, indeed, that spirit of dissipation which is too prevalent. It not only prohibits pleasures which are unlawful, but likewise that unlawful degree of attachment to pleasures in themselves innocent, which withdraws the attention of man from what is serious and important. But it brings amusement under due limitation, without extirpating it. It forbids it as the business, but permits it as the relaxation, of life. For there is nothing in the spirit of true religion, which is hostile to a cheerful enjoyment of our situation in the world.—BLAIR.

### BALLOONS.

THE idea of constructing a machine, which should enable us to rise into, and sail through, the air, would seem to have occupied the human mind even in ancient times, but it was never realized till within the last fifty years. The first who appears to have speculated rationally upon the subject was the celebrated Friar Bacon; he flourished in the thirteenth century, and described a machine, consisting of two

hollow globes of thin copper, exhausted of air, which answered the expectations of the inventor.

About the year 1630, Bishop Wilkins suggested the idea of constructing a chariot upon mechanical principles, in which it would be possible to traverse the regions of air. Cotemporary with him was Francis Lana, a Jesuit, who proposed a method similar to that of Bacon.

In 1709, Gusman, a Portuguese friar, constructed a machine in the form of a bird, with tubes and bellows to supply the wings with air; the inventor was rewarded with a liberal pension, but his machine failed. Gusman, however, was not discouraged, for in 1736 he constructed a wicker basket, seven feet in diameter, and covered with paper, which rose to the height of two hundred feet in the air. The success of this experiment procured for him the reputation of being a sorcerer. Twenty years after this, however, the science of Aërostation began to be studied upon philosophical principles. Among the first who wrote upon this subject was Joseph Gallien, of Avignon, who, in 1755, published a treatise, in which he recommended the employment of a bag of cloth or leather, filled with air lighter than that of the atmosphere. The discovery of hydrogen gas, by Mr. Cavendish, in 1766, was, however, the nearest approach to success. Mr. Cavallo made trial of this gas in 1782; and Messrs. Mongolfier, in the same year, discovered the art of raising balloons by fire.

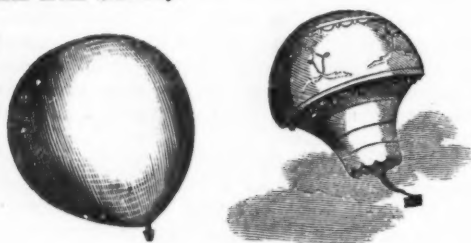
The first public ascent of a fire-balloon took place at Annonay, in France, in June, 1783; and, encouraged by the success of this experiment, Messrs. Robert constructed a balloon of thin silk, varnished with a solution of India rubber, which they filled with hydrogen gas; its inflation occupied several days. When completed, it was conveyed by torch-light to the Champ de Mars, and, on the 27th of August, ascended, in the presence of an immense multitude of spectators; after floating in air for three quarters of an hour, it descended in a field, fifteen miles from the place of its ascent.

Joseph Mongolfier was invited to Paris, by the Royal Academy of Sciences, and constructed a balloon of linen, lined with paper; its form was oval, seventy-five feet in height, and forty-three in width, which, when inflated by burning chopped straw and wool, was found to be capable of raising five hundred pounds' weight; a storm which took place at night destroyed the balloon and delayed the exhibition; but, in a few days after, it was placed in front of the palace at Versailles, where having been examined by the royal family, the inflation was completed, and a basket, containing a sheep, a duck, and a cock, being attached to it, it was liberated, and ascended to the height of 1500 feet. It fell about two miles from Versailles; the animals were uninjured, and the sheep was found quietly feeding near the place of its descent.

Hitherto no person had possessed sufficient courage to attempt a voyage through the air; but Mongolfier having constructed a balloon of superior strength, M. de Rozier offered to make the experiment. The machine having been inflated, he took his seat in the car, and rose to the height of three hundred feet—the greatest altitude he could attain, the balloon having been secured by ropes. After remaining stationary for several minutes, it gradually descended. The successful issue of this and subsequent experiments induced De Rozier to undertake an aerial voyage; and in November, 1783, he ascended from Paris, accompanied by the Marquis d'Arlandes: the balloon was visible during nearly the whole time of the



voyage, and descended in safety at the distance of five miles from that city.



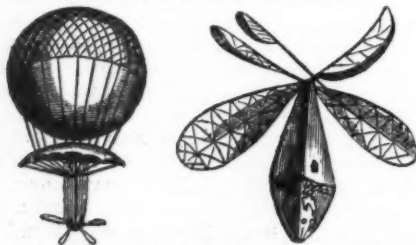
MONGOLIFIER'S BALLOONS.

A contest now arose between the partisans of the Mongolifierian mode of inflation and those who preferred hydrogen gas: the success of the late experiment gave a preponderance to the former method, but its opponents determined to bring the affair to a practical test: accordingly Messrs. Charles and Robert constructed a balloon of silk, varnished with a solution of elastic gum, the upper part being defended by a net, having a hoop round the centre, from which a car was suspended.



BALLOON OF MM. ROBERT AND CHARLES.

The weight of the whole apparatus was 640 lbs., and on the 1st of December, 1783, they ascended from the Tuileries. They soon rose to the height of 2000 feet, and continued at that elevation for nearly two hours, when they alighted 27 miles from Paris. The balloon still retained a great ascensive power; and, on M. Robert leaving the car, reascended with M. Charles, quickly attaining an elevation of 9000 feet. The earth was now no longer perceptible; but the sun, which had set previously to his second ascent, again became visible, and he saw its parting rays as it once more sank below the horizon: vapours ascending from the earth assumed the most fantastic forms, and the pale light of the newly-risen moon communicated a thousand varying hues; the approach of night, however, warned him to descend; he therefore opened the valve, and alighted in a field, three miles from Paris.



BLANCHARD'S BALLOON AND STEERING APPARATUS.

M. Blanchard, who afterwards acquired great celebrity as an aeronaut, and whose attention had long been directed to the invention of mechanical aids to the aerial voyager, made his first attempt in March, 1784, at Paris, in a balloon filled with hydrogen gas. Through the fears and imprudence of his companion, after having risen a few feet from the earth, they descended with a severe shock; but Blanchard, who now took the sole management, rose to the height of a mile; and, after having been driven through various currents of air during nearly two hours, he descended in safety.

In September, 1784, the Duke of Orleans, accompanied by Messrs. Robert, ascended in a balloon furnished with oars and rudder; to this a small balloon was attached, for the purpose of being inflated with bellows, and thus supplying the means of descent

without waste of the hydrogen gas. Having attained the altitude of fourteen hundred feet, they were greatly alarmed at the sombre aspect of the horizon, and the reverberation of distant peals of thunder; being also, for a considerable time, exposed to the fury of a whirlwind; from a sudden change of temperature they began rapidly to descend, but, on discharging some ballast, they reascended to the height of six thousand feet, the balloon continuing to be greatly agitated. Having surmounted the stormy region, the rays of the sun, unobscured by a cloud, caused so great an expansion of the gas, that they entertained serious apprehensions of a rupture of the balloon. In this exigency the duke pierced it in several places with his sword, to facilitate the escape of the gas, and, having narrowly escaped falling into a lake, they descended unhurt, after an excursion of five hours.

The first experiment in England was made by Count Zambecari. On the 25th of November, 1783, a balloon of oiled silk, richly gilt, and filled with hydrogen gas, ascended from Moorfields, London. At the latter end of the same year, Mr. Sadler sent up one from Oxford. But the first aerial voyage in England was made by Signor Lunardi, who ascended from London on the 21st of September, 1784; he subsequently repeated the experiment in various parts of England, and in the following year ascended from Edinburgh and Glasgow.

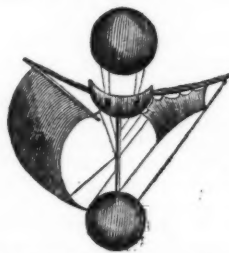


LUNARDI.

In January, 1785, M. Blanchard and Dr. Jefferies undertook an excursion from Dover across the British Channel. The balloon rose slowly, and afforded them an enchanting view of the southern coast of England; but their progress was considerably impeded by the stillness of the air. When an hour had elapsed they began to descend, and threw out the whole of their ballast; on arriving midway between England and France, they threw out their books and provisions; still the ascensive power was so greatly diminished, that they parted with their anchors and ropes, stripped off their clothes, and secured themselves with slings, intending to cut away the car, when suddenly the balloon arose, and approached the French coast; and, after a perilous journey of nearly three hours, they descended in the neighbourhood of Calais.



BLANCHARD.

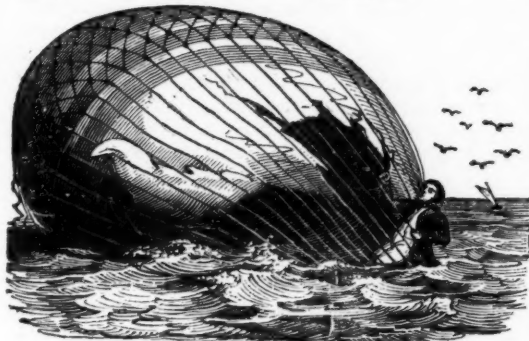


DE ROZIER'S BALLOON WITH SAILS.

To possess the power of floating in the atmosphere, or descending at pleasure, without waste of gas or ballast, had long been a desideratum with the French naturalists. A combination of the two kinds of balloon was recommended for this purpose, and M. Pilatre de Rozier unfortunately undertook the task of putting the plan in execution. One of the balloons was inflated with hydrogen gas, and below it was suspended a fire-balloon, at such a distance as to remove every apprehension of danger from the fire.

A short time, however, had elapsed, when the upper balloon was seen to be rapidly expanding, while the aeronauts (M. M. de Rozier and Romain) made every exertion to facilitate the escape of the gas. Soon afterwards the whole apparatus appeared to be on fire, and the remains of the machine descended from a height of three quarters of a mile with the mangled bodies of the voyagers.

In July, 1785, Major Money ascended in a balloon of his own construction, which unfortunately burst, and he was precipitated into the German Ocean. For five hours he remained in a situation of imminent suffering and peril, clinging to the wreck of the balloon, by the aid of which he contrived to keep himself floating. He was picked up by the *Argus* sloop of war, off the coast of Yarmouth.



PERILOUS SITUATION OF MAJOR MONEY.

The excursion of M. Testu, from Paris, in June 1786, is without a parallel, having lasted twelve hours. His balloon was furnished with wings and other apparatus for steering; when he had reached an elevation of three thousand feet, the distension of his balloon gave him serious apprehensions of a rupture; he therefore descended in a corn-field in the plain of Montmorenci. An immense crowd ran eagerly to the spot; and the proprietor of the field, exasperated at the injury his crop had sustained, seized M. Testu, and demanded indemnification; the aeronaut made no resistance, but persuaded the peasant, that having lost his wings, he could not possibly escape. The ropes were seized by a number of persons, who attempted to drag the balloon towards the village; but as, during the procession, it had acquired considerable buoyancy, Testu cut the cords, and left the disappointed peasants overwhelmed with astonishment. The temperature was at the freezing point, and particles of ice floated around him. As night approached, the blast of a horn attracted his attention, and seeing a party of huntsmen, he suffered some gas to escape, and descended. He now resigned his wings as a useless incumbrance, and reascended through a mass of electric matter. Shrouded in darkness, he was wafted about for three hours in the gloomy region of the gathering storm. The surrounding terrors, the lightning's flash and the roaring of thunders, accompanied by copious drifts of sleet and snow, did not damp his courage: a flag ornamented with gold frequently emitted sparks of fire, and was ultimately torn in pieces by the lightning. At length the elemental conflict ceased, and the stars began to appear; between two and three, the ruddy streaks of light in the east announced the approach of day; and after beholding the rising of the sun, he descended uninjured, about 70 miles from Paris.

In August, 1787, M. Blanchard, during a voyage from Strasburg, tried an experiment with a Parachute, to which was appended a dog in a basket: at an altitude of six thousand feet, he let go the

parachute, which, being caught by a whirlwind, soon disappeared. Some time afterward, he fell in with the parachute, when the dog testified his satisfaction by barking: Blanchard descended in safety, and the parachute reached the earth shortly afterward.

In October, 1797, M. Garnerin ascended from Paris, for the purpose of descending in a parachute. When at the height of 2000 feet, he disengaged it from the balloon: at first, the motion was slow and steady, it afterwards assumed an oscillatory motion, but he reached the earth without injury.

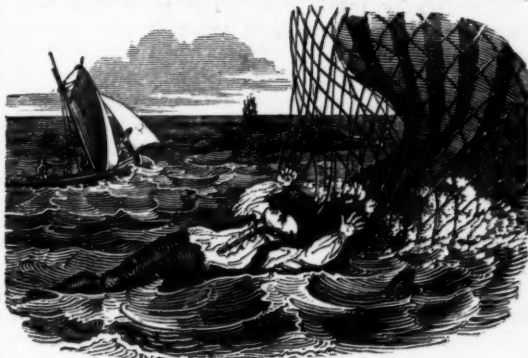
In 1802, he visited England, and ascended from Ranelagh Gardens, London, accompanied by a naval officer: such was the rapidity of their voyage, that in less than an hour they reached Colchester, having suffered greatly from the boisterous state of the atmosphere. In July and September of the same year, Garnerin repeated his experiments, and on the latter occasion descended in a parachute\*; the result of this voyage was similar to the one mentioned above.



DIFFERENT POSITIONS OF THE PARACHUTE.

In October, 1803, Count Zambecari, Dr. Grassetti and Signor Andreoli, ascended from Bologna: the cold was so intense that the Count and the Doctor fell into a profound sleep; but Signor Andreoli, who had resisted this lethargic propensity, was able to rouse his companions previous to their descent into the sea. They immediately discharged ballast, &c., and again arose: they were afterwards driven towards the coast of Istria, and nearly across the Adriatic, remaining upon its surface for nearly five hours; at length, they were taken on board a vessel which lay at the distance of twenty miles from the coast.

Among the most perilous ascents on record, are those of Mr. Sadler, from Bristol, in 1810, and Dublin,



DESCENT OF MR. SADLER IN THE IRISH CHANNEI.

\* The Parachute is an apparatus with an expanding top, somewhat similar to a large umbrella, and with a small deep basket attached to it, in which the aeronaut sits. It was suspended to the balloon by ropes, so contrived as to be loosened at the pleasure of the voyager, while sailing in the air. When this was done, the balloon rapidly ascended, and the parachute, on the contrary, dropped downwards, with a frightful rapidity, until the top was forced open by the power of the air. In this form the parachute was blown about in various directions, as shown in the cut, and a zigzag and perilous descent was effected.

in 1812; on both occasions the balloon descended in the sea: on the latter, the wind forced it for some time along the surface of the waves with great velocity; a flock of sea-fowl crowded around, and boldly devoured what remained of the provisions. The car now sank, and Mr. S. supported himself by the network; in this dangerous situation he was dragged through the water until a vessel approached; and, there being no alternative, the balloon was pierced with the bowsprit, and the sinking and nearly exhausted adventurer taken on board.

At the coronation of George IV., in 1820, Mr. Green ascended from St. James's Park in a balloon inflated with carburetted hydrogen, or coal-gas; the success of this experiment so much increased the facilities, and diminished the expense, that balloon-ascents have become of so common occurrence as to excite but little attention.

Such is an account of several of the most remarkable ascents; some of our modern aeronauts have ascended more than a hundred times.

With the exception of some trifling additions to our stock of meteorological knowledge, the advantages arising from aerial navigation are far less considerable than were at first expected; but, though its utility has hitherto been circumscribed, some future discovery may yet render it a valuable acquisition to science.

#### INSTANCES OF MEMORY.

THERE is still living, at Stirling, a blind old beggar known to all the country round by the name of Blind Alick, who possesses a memory of almost incredible strength. It was observed with astonishment, that when he was a man, and obliged, by the death of his parents, to gain a livelihood by begging through the streets of his native town of Stirling, he knew the whole of the Bible, both Old and New Testaments, by heart! from which you may repeat any passage, and he will tell you the chapter and verse; or you may tell him the chapter and verse, and he will repeat to you the passage, word for word. Not long since a gentleman, to puzzle him, read, with a slight verbal alteration, a verse of the Bible. Alick hesitated a moment, and then told where it was to be found, but said it had not been correctly delivered; he then gave it as it stood in the book, correcting the slight error that had been purposely introduced. The gentleman then asked him for the ninetieth verse of the seventh chapter of Numbers. Alick was again puzzled for a moment, but then said hastily, "You are fooling me, sirs! there is no such verse—that chapter has only eighty-nine verses." Several other experiments of the sort were tried upon him with the same success. He has often been questioned the day after any particular sermon or speech; and his examiners have invariably found, that, had their patience allowed, Blind Alick would have given them the sermon or the speech over again.—*St. James's Chronicle*.

Numerous individuals have been celebrated for their amazing recollective powers of mind; Scaliger, it is said, could repeat a hundred verses or more, after having read them a single time; and Seneca says, he could repeat two thousand words on hearing them once, although they had no dependence or connexion with each other. Perthicus prepared his comment upon Claudian without referring to the text; and the learned Florentine, Magliabechi, is recorded to have possessed such powers of retention, as to be capable of recollecting not only the sense of what he read, but likewise at times the very words

and the spelling. To prove the power of his prodigious memory, a gentleman lent him a manuscript; and he returned to him some time afterwards, pretending it had been lost, requesting Magliabechi to recollect as much of it as possible, on which, it is said, that he wrote the whole of it without missing a word. Many other examples of a similar nature might be easily quoted, but to enumerate more appears unnecessary. For the improvement of the memory, a habit of strict attention is of essential importance in whatever object of pursuit we may be engaged, as well as a systematic method of procedure in study or business. Moderate and repeated exercise is also peculiarly adapted to invigorate and strengthen the memory; and indeed it is almost incredible to what extent daily use will promote this attainment. Some public orators, for example, will distinctly charge the mind with a regular discourse within a very limited time, who at the first experienced the greatest difficulty in attempting to do so. In general, public speakers, especially those at the bar, afford striking instances of the improvement of this noble faculty, in recollecting and refuting the arguments of their opponents, and prove to what wonderful perfection the memory may arrive by active and continued practice.—*Encyclo. Edinens.*

#### AN INFANT'S PERIL.

AN event, which occurred near Briançon, will give some notion of the perils of mountain-life and field-sports in these regions (the French and Italian Alps).

A peasant, with his wife and three children, had taken up his summer quarters in a chalet\*, and was depasturing his flocks on one of the rich Alps† which overhang the Durance. The oldest boy was an idiot, about eight years of age, the second was five years old, and dumb, and the youngest an infant. It so happened, that the infant was left one morning in the charge of his brothers, and the three had rambled to some distance from the chalet before they were missed. When the mother went in search of the little wanderers, she found the two elder, but could discover no traces of the baby. The idiot boy seemed to be in a transport of joy, while the dumb child displayed every symptom of alarm and terror. In vain did the terrified parent endeavour to collect what had become of the lost infant. The antics of the one, and the fright of the other, explained nothing. The dumb boy was almost bereft of his senses, whilst the idiot appeared to have acquired an unusual degree of mirth and expression. He danced about, laughed, and made gesticulations, as if he were imitating the action of one who had caught up something of which he was fond, and hugged it to his heart. This, however, was some slight comfort to the poor woman, for she imagined that some acquaintance had fallen in with the children, and had taken away the infant. But the day and night wore away, and no tidings of the lost child. On the morrow, when the parents were pursuing their search, an eagle flew over their heads, at the sight of which the idiot renewed his antics, and the dumb boy clung to his father with the shrieks of anguish and affright. The horrible truth then burst upon their minds, that the miserable infant had been carried off in the talons of a bird of prey, and that the half-witted boy was delighted at the riddance of an object of which he was jealous.

\* A small cabin, or shed, for the summer.

† Alp, in its original acceptation, does not signify mountain-height, but mountain-herbage, fed off by flocks and herds sent to depasture there.



On the morning in which the accident happened, an Alpine hunter—

Whose joy was in the wilderness—to breathe

The difficult air of the iced mountain's top,

had been watching near an eagle's nest, under the hope of shooting the bird, upon her return to the eyry. After waiting with all the anxious perseverance of a true sportsman, he beheld the monster slowly winging her way towards the rock behind which he was concealed. Imagine his horror, when, upon a nearer approach, he heard the cries and distinguished the figure of an infant, in her fatal grasp. In an instant, his resolution was formed—to fire at the bird at all hazards, the moment she should alight upon the nest, and rather to kill the child, than allow it to be torn to pieces by the horrid devourer. With a silent prayer, and a steady aim, the mountaineer poised his rifle. The ball went directly through the head or the heart of the eagle, and in a minute afterwards this gallant hunter of the Alps had the unutterable delight of snatching the child from the nest, and bearing it away in triumph. It was dreadfully wounded by the eagle's talons in one of its arms and sides, but not mortally; and within twenty-four hours after it was first missed, he had the satisfaction of returning it to its mother's arms.

—GILLIES' *Second Visit to the Vaudois*.

#### ON THE SABBATH.

WITHOUT reference to the divine origin of the Sabbath, the appropriation of one day in the week for religious and moral instruction, for reflection on our duties, our errors, and the means of amendment; for reviewing our condition here, and weighing our hopes hereafter, seems the wisest institution, for the promotion of virtue and happiness.

It is thus alone that the hard-wrought labourer finds leisure to receive instruction, or to communicate to his children the fruit of his experience; while the eager man of business, as well as the abandoned libertine, meeting with these frequent intervals of religious worship, are led to think of their duties, as well as of their gains or their pleasures. From this spring of instruction and serious reflection, knowledge and good morals naturally flow; and the blessings of a wise and vigorous government become inviolable, because they become thoroughly understood.—*Lives of eminent British Statesmen*.

PRIDE urges men to inquire into the *philosophy* of Divine Truth. They are not contented, for example, with the account which the Bible gives of the origin of evil, and its actual influence on mankind; but they would supply what God has left untold. They would explain the fitness and propriety of things. A mathematician may summon his scholars round his chair, and from self evident principles deduce and demonstrate his conclusions: he has axioms; but concerning evil, we have none. A Christian may say on this subject, as Sir Christopher Wren did concerning the roof of King's College Chapel—"Show me how to fix the first stone, and I will finish the building." Explain the origin of evil, and I will explain every other difficulty respecting evil. We are placed in a disposition and constitution of things under a righteous governor. If we will not rest satisfied with this, something is wrong in our state of mind. It is a solid satisfaction to every man who has been seduced into foolish inquiries, that it is utterly impossible to advance one inch by them. He must come back to rest in God's appointment. He must come back to sit patiently, meekly, and with docility, at the feet of a teacher.—CECIL.

THE religious pleasure of a well-disposed mind moves gently, and therefore constantly. It does not affect by rapture and ecstasy, but is like the pleasure of health, still and sober, yet greater and stronger than those which call up the senses with grosser impressions.—SOUTH.

#### THE MOLE. (*Talpa europæus*, LINN.)

THERE are many animals in which the Divine wisdom may be more agreeably illustrated; yet the uniformity of its attention to every article of the creation, even the most contemptible, by adapting the parts to its destined course of life, appears more evident in the mole than in any other animal.

A subterraneous abode being allotted to it, the seeming defects of several of its parts vanish; which instead of appearing maimed, or unfinished, exhibit a most striking proof of the fitness of their contrivance. The breadth, strength and shortness of the fore-feet, which are inclined sideways, answer the use as well as form of hands; to scoop out the earth, to form its habitation, or to pursue its prey. Had they been longer, the falling in of the earth would have prevented the quick repetition of its strokes in working, or have impeded its course: the oblique position of the fore-feet has also this advantage, that it flings all the loose soil behind the animal.

The form of the body is not less admirably contrived for its way of life: the fore-part of it is thick and very muscular, giving great strength to the action of the fore-feet: enabling it to dig its way with amazing force and rapidity, either to pursue its prey, or elude the search of the most active enemy. The form of its hind parts, which are small and taper, enables it to pass with great facility through the earth, that the fore-feet had flung behind; for had each part of the body been of equal thickness, its flight would have been impeded, and its security precarious.

The smallness of the eyes (which gave occasion to the ancients to deny it the sense of sight), is to this animal a peculiar happiness; a small degree of vision is sufficient for an animal ever destined to live underground: had these organs been larger, they would have been perpetually liable to injuries by the earth falling into them; but Nature, to prevent that inconvenience, hath not only made them very small, but also covered them very closely with fur. Anatomists mention, besides these, a third very wonderful contrivance for their security; and inform us, that each eye is furnished with a certain muscle, by which the animal has power of withdrawing or exerting them, according to its exigencies.

To make amends for the dimness of sight, the Mole is amply recompensed by the great perfection of two other senses, those of hearing and of smelling: the first gives it notice of the most distant approach of danger; the other, which is equally exquisite, directs it, in the midst of darkness, to its food; the nose, also, being very long and slender, is well formed for thrusting into small holes, in search of the worms and insects that inhabit them. These gifts may with reason be said to compensate the defect of sight, as they supply in this animal all its wants, and all the purposes of that sense, and it is therefore amply supplied with every necessary accommodation of life.

The Mole breeds in the spring, and brings forth four or five young at a time; it makes its nest of moss, and that under the largest hillock, a little below the surface of the ground. The Mole is observed to be most active, and to cast up most earth, immediately before rain, and in the winter before a thaw, because at those times the worms and insects begin to be in motion, and approach the surface. On the contrary, in very dry weather, this animal seldom or never forms any hillock, as it penetrates deep after its prey, which at such seasons retires far into the ground. The Mole shows great art in skinning a worm, which it always does before it eats it,

stripping the skin from end to end, and squeezing out all the contents of the body.



THE MOLE.

The under-ground passages formed by the burrows of the moles, are generally connected with a sort of chamber, in which the nest is made, and the young deposited. The moles often traverse these passages to and from their nests; and which probably act as traps, where worms, beetles, and grubs, that constitute the chief food of the moles, often are caught by them. In gardens and corn-fields, moles often do much damage, by loosening the earth at the roots of plants. In meadows, they also do some injury, but there they assist also in draining the land. The quantity of grubs, beetles, and worms which they consume is very great, and very beneficial. They have been accused of eating the seed and roots of plants; but it is very uncertain whether they feed on either. It is also doubtful whether the sight of the mole is so imperfect as has been supposed; it may be suited to the obscurity of their under-ground dwellings and habits, though the light above-ground overpowers it.

M. S. L. I.

#### HE MONKEYS AND THE CAMEL.

Two monkeys, passionate and vain,  
Possess'd of far more tongue than brain,  
Disputed long, in language high,  
On matters of Zoology.  
Said Jacko, "Well, we live and learn;  
And you will wonder in your turn;  
I find there grows, (O wondrous lack!)  
No hunch upon a Camel's back."  
"Pooh! folly!" cried his brother ape,  
"You quite forget the Camel's shape;  
I never saw a Camel yet,  
Without a hunch—my life I'll bet!  
I rode one lately as my hack,  
And felt the hunch upon his back!"  
"Tis false, Sir Pug, and very hard  
Thus to be doubted: here's my card.  
I'll say no more about the brute,  
Let pistols settle the dispute."

And then, as all was fitly timed,  
The paces measured, pistols primed,  
The world had held two monkeys less,  
All through this mutual redress.  
Had not the seconds interfered,  
And thus the point of quarrel clear'd:  
"Error and truth to each belong,  
You both are right, and both are wrong.  
The Camel's hunch, by Nature's laws,  
When food has fail'd, and hunger gnaws  
Oft proves a gift benignly sent,  
To aid the creature's nourishment,  
And, guarding thus from famine's shock,  
Contributes to the general stock.  
The very hunch Sir Pug admired  
In yonder Camel, has retired;  
And when that hunch had ceased to be,  
Then, Jacko, 'twas not seen by thee.  
Put up your pistols, use your eyes,  
And learn from Nature to be wise."

The positive and angry wight,  
Is seldom altogether right.

M.

#### THE MONTH OF JULY.

THIS month, in the Alban Calendar, was called *Quintilis*, it being, as the name denotes, the fifth in their year, which consisted of but ten months, of very unequal length, some having thirty-six, while to others were assigned no more than sixteen days. Romulus equalized the number of days, giving to the months, alternately, thirty-one and thirty; but he did not attempt to regulate the supplementary days used in the Alban Calendar, to complete the period of the Solar year. Numa formed them into two additional months of twenty-nine and twenty-eight days, which he placed before *Martius*, (March,) making his year to begin on the first of *Januarius*; and thus July became the seventh month of the year, though it retained its name of *Quintilis* until Mark Antony, in compliment to Julius Cæsar, and as a lasting memorial of the benefit he had conferred on the world at large, by rectifying the hitherto confused and irregular method of dividing the year, changed its name to *Julius* (July). The Saxons called this month *Hew Monath*, or *Hey Monath*, because in it they generally mowed and gathered in their hay; it was also called *Maed Monath*, because at this season the meads are covered with bloom. On the 23rd the sun enters Leo; therefore, in most allegorical representations, the principal figure is accompanied by a lion. The fact, that about this time, that bright star in the constellation of Canis Major, called *Sirius*, or the Dog Star, rises with the sun, has caused the period between the 3rd of July and 11th of August to bear the name of the *Dog Days*. The ancients supposed that the malignant influence of this star, when in conjunction with the sun, caused the sea to boil, wine to become sour, dogs to grow mad, and all other creatures to languish, while in men it produced fevers and other malignant disorders; these exaggerated notions of its baneful effects are now dispelled, but still the period bears the name, and we anticipate with dread the heat of the Dog Days, though, in our variable climate at least, the weather during this period is frequently less sultry than at other times.

#### ANNIVERSARIES IN JULY.

##### MONDAY, 1st.

1690 The Battle of the Boyne, at which both James II. and William III. were present. James, being completely defeated, fled to Waterford, where he took ship for France, and abandoned for ever his pretensions to the crown of England.

##### TUESDAY, 2nd.

1644 The Battle of Marston Moor, in which the Royalists were defeated by the Parliamentary army.

##### WEDNESDAY, 3rd.

The Dog Days begin.

1819 A comet of great brilliancy appeared in the North.

##### THURSDAY, 4th.

1533 John Fryth, a native of Sevenoaks, in Kent, and educated at Cambridge, having become a convert to the doctrines of Luther, was burnt at Smithfield.

1761 Died Samuel Richardson, author of *Sir Charles Grandison*, &c. He was the first who endeavoured to render works of fiction the medium for conveying moral instruction.

1776 The British Colonies, in North America, declared themselves independent.

1816 Died, in the seventy-ninth year of his age, Richard Watson, Bishop of Llandaff, the temperate, learned, and able defender of Christianity against the gross attacks of Paine, and the not less dangerous insinuations of Gibbon.

##### FRIDAY, 5th.

1100 Jerusalem taken by the Crusaders. The idea of rescuing the Holy Sepulchre from the Infidels, a scheme at once so bold, and apparently so hopeless, was first suggested by a recluse, afterwards known as *Peter the Hermit*. Inflamed by his zeal, princes and warriors entered with enthusiasm into the project; all ranks and ages shared the phrensy of the moment; and, if we may believe contemporary authors, six millions of persons assumed the cross. It was impossible to stem such a torrent; all Syria and Palestine fell, and the triumphant banner of the Cross was planted on Mount Zion.

1685 The Battle of Sedgemoor, in which the Duke of Monmouth was defeated.

1718 *Peter the Great*, moved by suspicion and jealousy, condemned to death his only son: the unfortunate young man did not live for this cruel sentence to be executed, but is said to have died of horror on hearing it read.

##### SATURDAY, 6th.]

1415 John Huss, a follower of the doctrines of Wickliffe, was condemned and burned for heresy at Constance, a city in the south of Germany.

1484 Coronation of Richard III. and his Queen, Anne.

1553 Expired at Greenwich, in his sixteenth year, Edward VI., the last male descendant of the line of Tudor. His early virtues, and firm adherence to the reformed religion, rendered his death an irreparable loss.

1815 The Allied Forces of England, Prussia, Austria, and Russia, entered Paris after the Battle of Waterloo.

##### SUNDAY, 7th.

##### FIFTH SUNDAY AFTER TRINITY.

1307 Death of Edward I. Having conceived the vast project of uniting under one sovereign the whole Island of Britain, he pursued it to the last hour of his life.

1647 Thomas Aniello, better known by the name of *Masaniello*, raised a sudden revolt among the *lazzaroni* of Naples, and, for the moment, held the lives of the magistrates and inhabitants at his mercy; but, being accused of betraying the interests of the rabble, he was murdered, after having enjoyed his sudden elevation but eight days.

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